PHENIX

TECHNICAL SUPPORT 2012

PHENIX WEEKLY PLANNING

9/13/2012

Don Lynch

PHENIX

This Week

TECHNICAL SUPPORT 2012

- Complete Rewire and re-plumb the MuTr south station 1
- Continue Repairs & Upgrades for MuTr Stations 2&3 N&S
- Continue Prep for DC West
- Continue MPC N&S Repairs
- Continue VTX/FVTX Repairs
- sPHENIX design support
- MPC-Ex design support

PHENIX

TECHNICAL SUPPORT 2012

Next Week

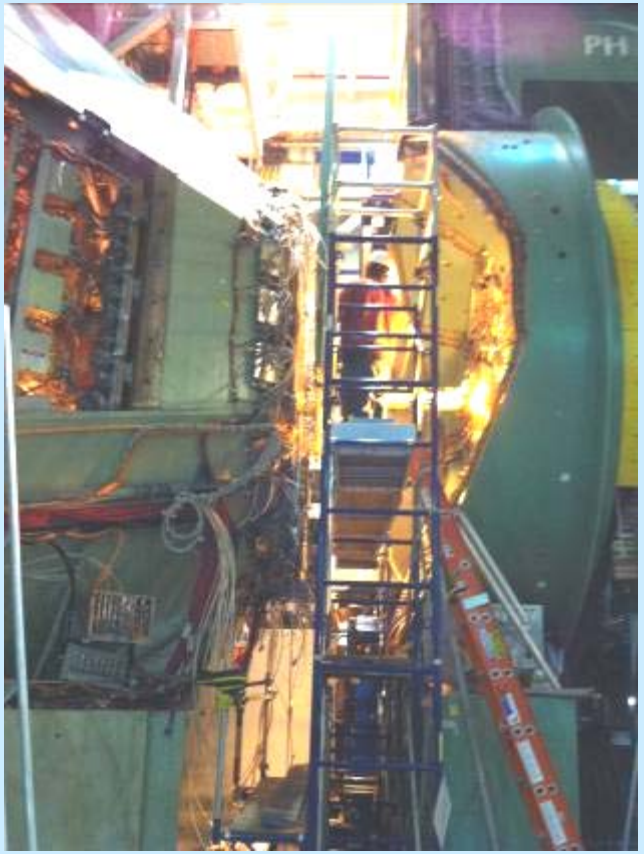
- Continue Repairs & Upgrades for MuTr Stations 2&3 N&S
- Continue Prep for DC West
- Continue MPC N&S Repairs
- Continue VTX/FVTX Repairs
- VTX Cooling System Upgrades
- RPC3 Gas Recirculation Upgrade
- RPC1 South Cooling Upgrade & Thermocouples
- sPHENIX design support
- MPC-Ex design support

VTX/FVTX

TECHNICAL SUPPORT 2012

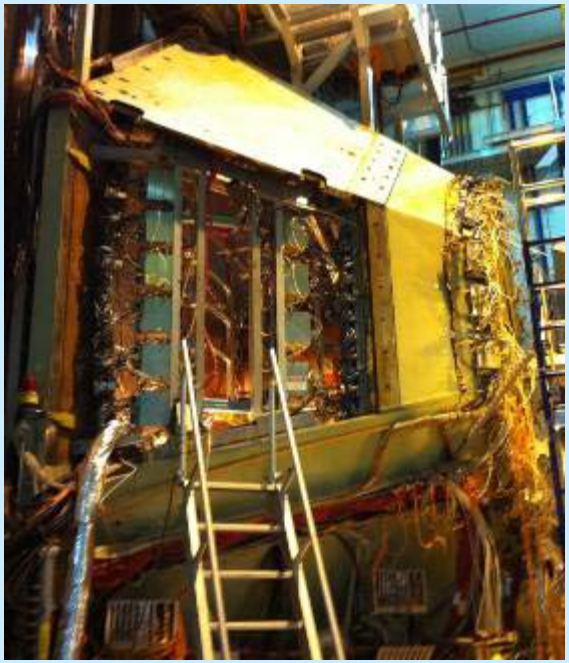
Repairs and testing
in Progress at Chemistry (VTX)
and Physics (FVTX) Departments

- Station-1 South re-capacitation and termination



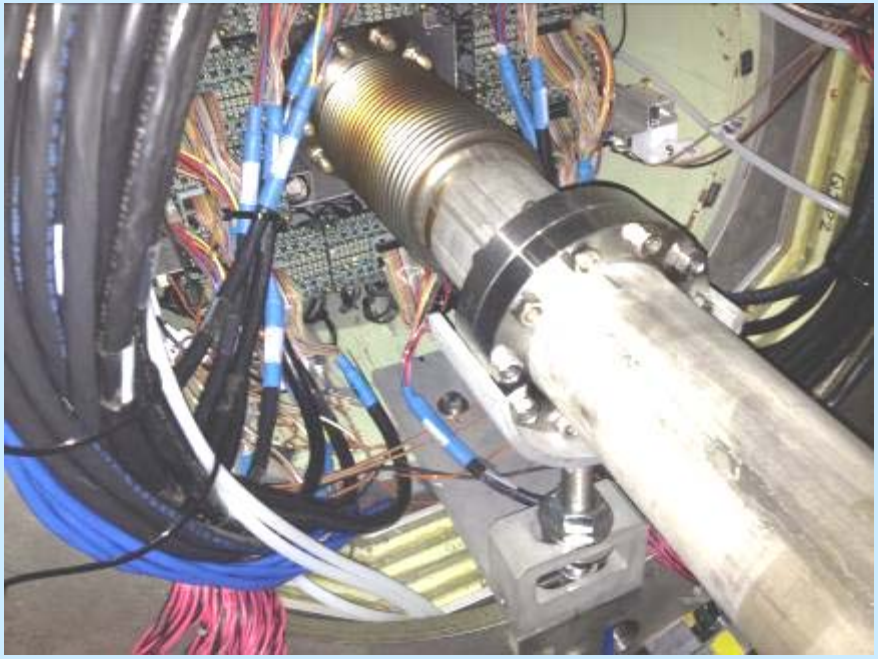
Clamp-on Terminator Installation on North & South Station-3

- Lower clamp-on terminators already installed for both north and south sta-3 (bottom 4 octants)
- With new work platforms that reaches all of sta-3; install remaining (upper) clamp-on terminators.



MPC Repairs –

North MPC Removed for Evaluation



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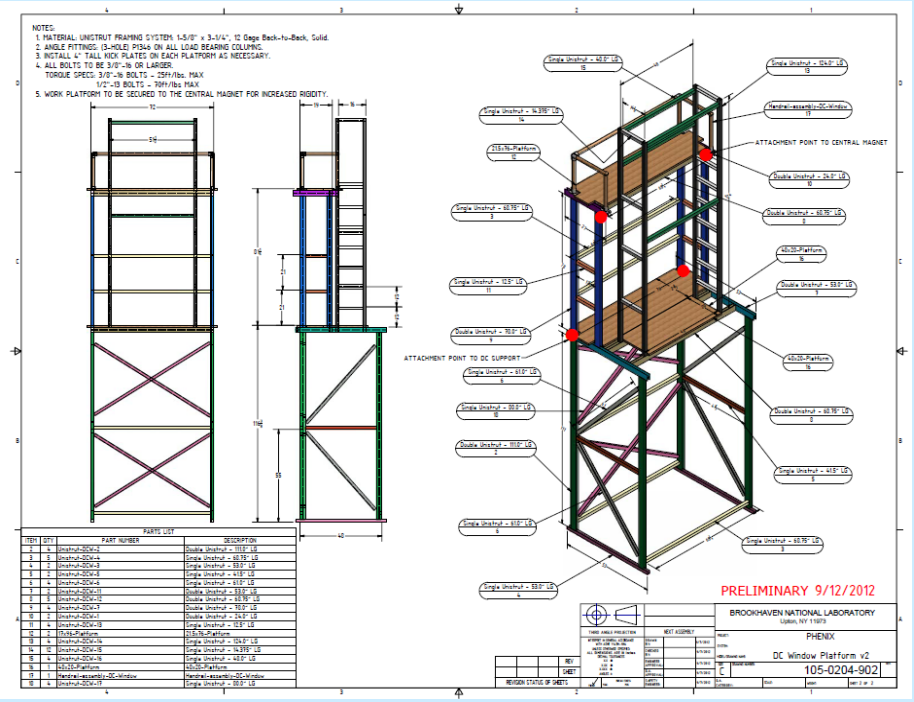
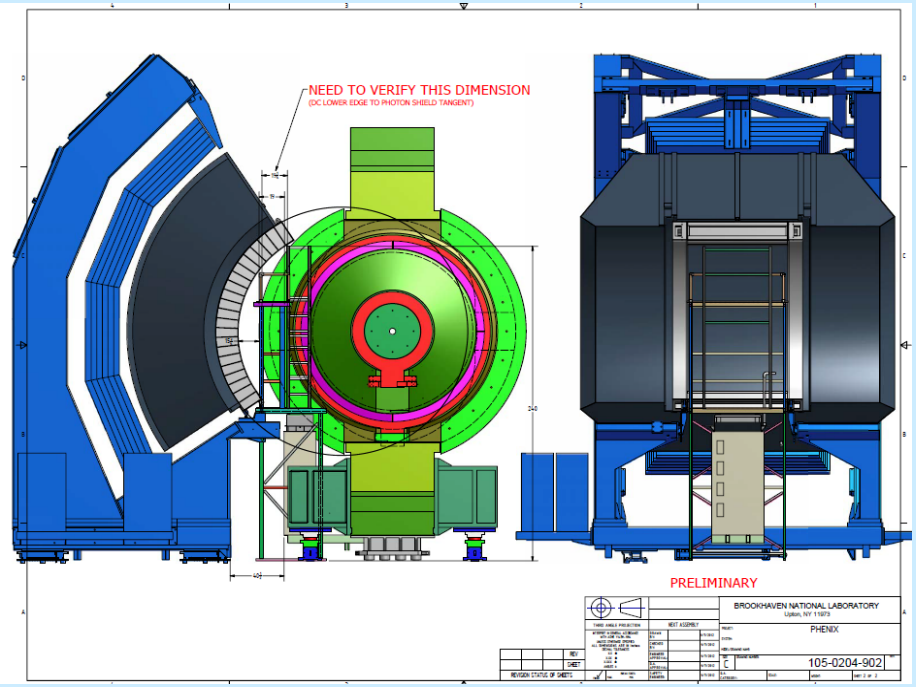
DC West Repairs

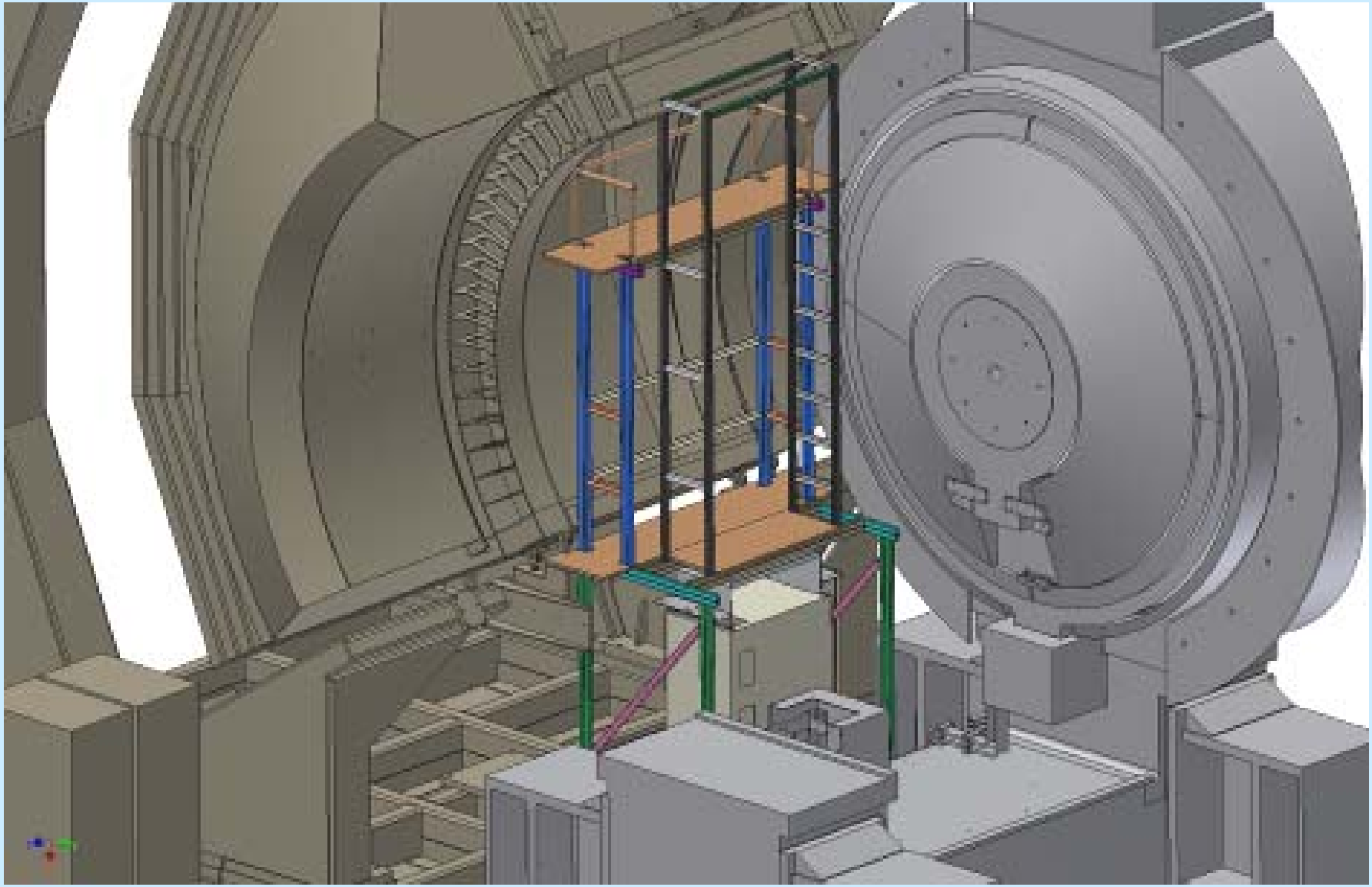
The plan for the DC West Repairs is as follows:

- Gather drawings and materials from DC group – Done
- Make measurements, new drawings and create parts lists as necessary - Done
- Procure/fabricate parts - Done
- Design work platforms and protective covering to access and protect DC west during disassembly/ reassembly. CAD review in progress
- Disassemble existing window and sealing components
- Repair/remove broken wires, etc.
- Install new window and seal.
- Leak and functional tests

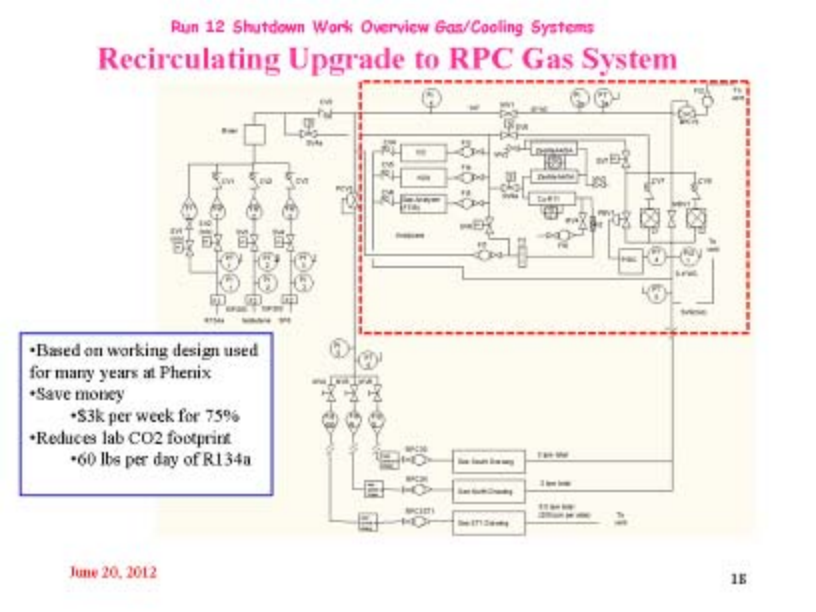




TECHNICAL SUPPORT 2012



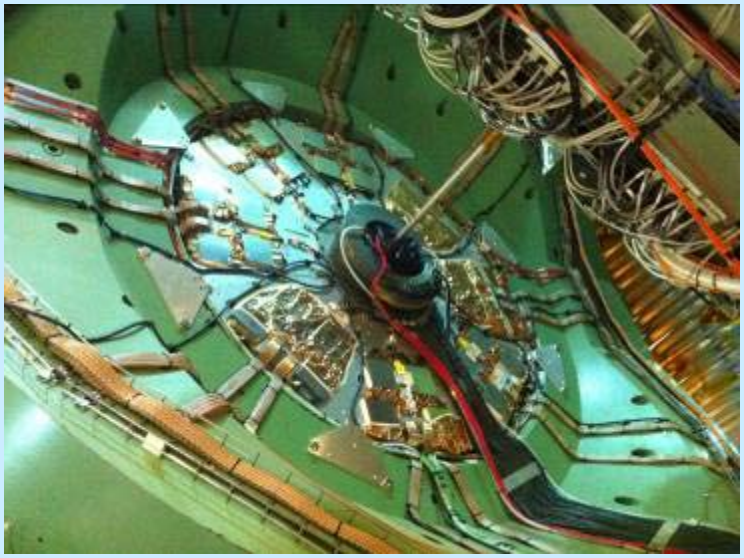
TECHNICAL SUPPORT 2012



VTX/FVTX Cooling Upgrade

RPC Recirculation Upgrade

RPC Station 1 North and South Cooling Upgrade



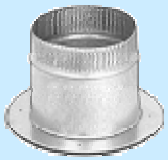
North

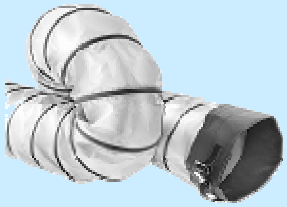
South

TECHNICAL REPORT 2012

RPC1 Cooling

South





North

Item Number/Brand	89685804/Allegro
Type/Power	Axial Blower/Electric
Inlet/Outlet Size (Inch)	8
Cubic Feet per Minute (CFM)	625 (Two 90 Bends); 650 (One 90 Bend); 900 (Free Air)
Horsepower (HP)	0.33
Explosion Proof (Yes/No)	Yes
Blower Casing Material	Polyethylene
Number of Speeds	1
Maximum Voltage Rating (V)	115.00

RPC Background Attenuation Project

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Looking towards RPC3 North
← East West →

Looking towards RPC3 South
← West East →

RPC Background Attenuation Project

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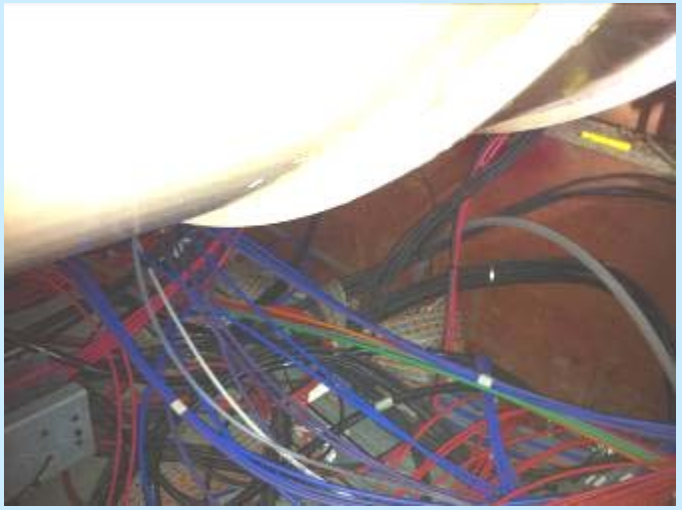
Under DX at RPC3 North
← East West →

Under DX at RPC3 South
← West East →



MuID Collar IR Holding Area Support

Structural support improvements designed

Parts to be ordered

Installation this fall prior to EC roll in

TECHNICAL SUPPORT 2012

New Electrical Work for 2012 Shutdown, to be accomplished as time is available

1. Add Transient Surge Suppressor to 3 phase power panel on the Central Magnet Bridge.
2. The Gas Mixing House Breaker Panel for the Gas Mixing side is almost out of spare breaker slots and needs to be reviewed for increased capacity panel to replace it.

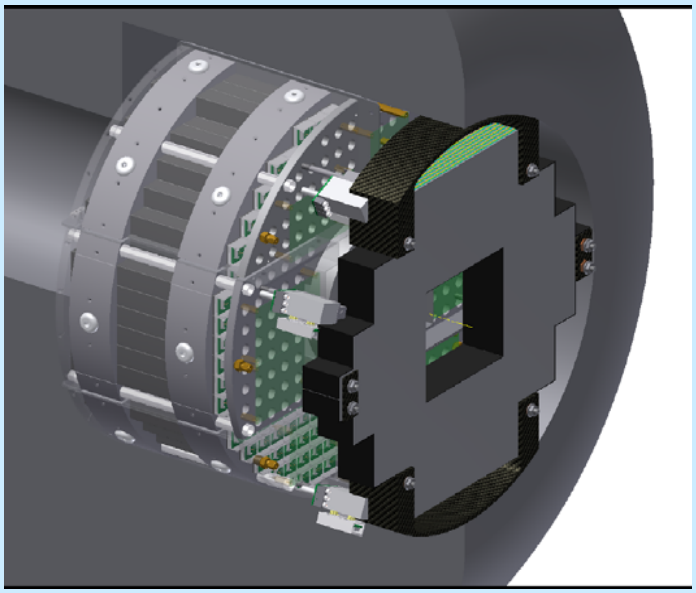
Additional Work for 2012, not yet scheduled, to be fit in as available

1. Replaced aging magnet hoses (CM only)
2. identify obsolete services passing through sill and remove them.
3. Cover for services coming from IR through sill.
4. Plan for stripping out TEC electronics and services to free up TEC racks.
5. Add limit switch and improved spooling control for window washer cable.

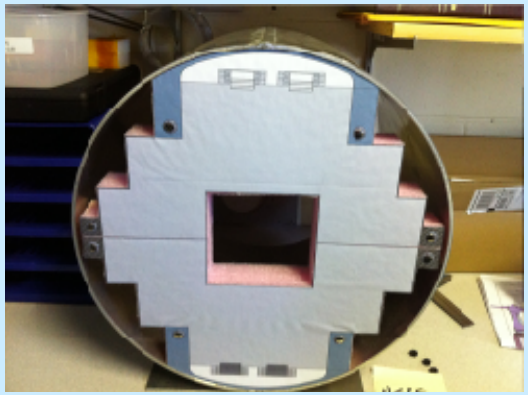
PHENIX Electronics Upgrades

1. Replace remaining RS-485 type ADAMs on West carriage with MODBUS/TCP type.
2. Install Ethernet switches and MODBUS/TCP ADAMs on Central Magnet arm.
3. Install second MODBUS server in counting house.
4. Install MTP patch bay and jumpers for FVTX in counting house.
5. Add several backup MTP fibers from CH to IR

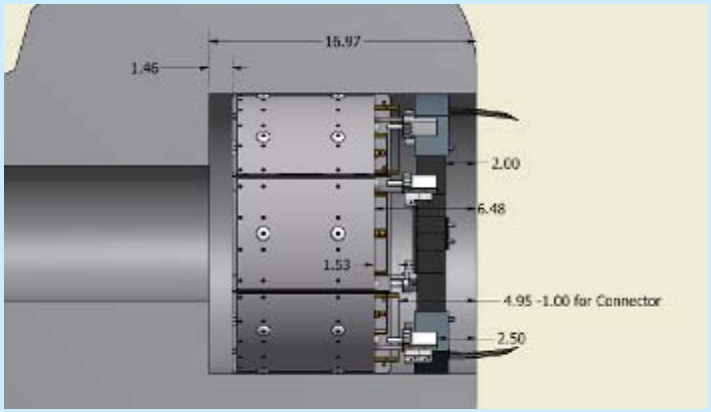
TECHNICAL SUPPORT 2012

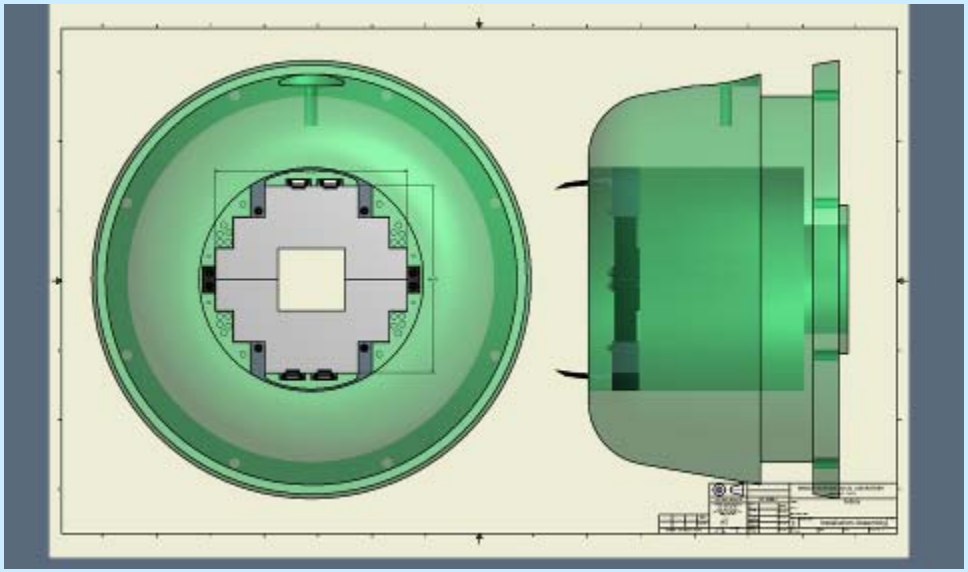


MPC-Ex Approved this week



Foam Mockup





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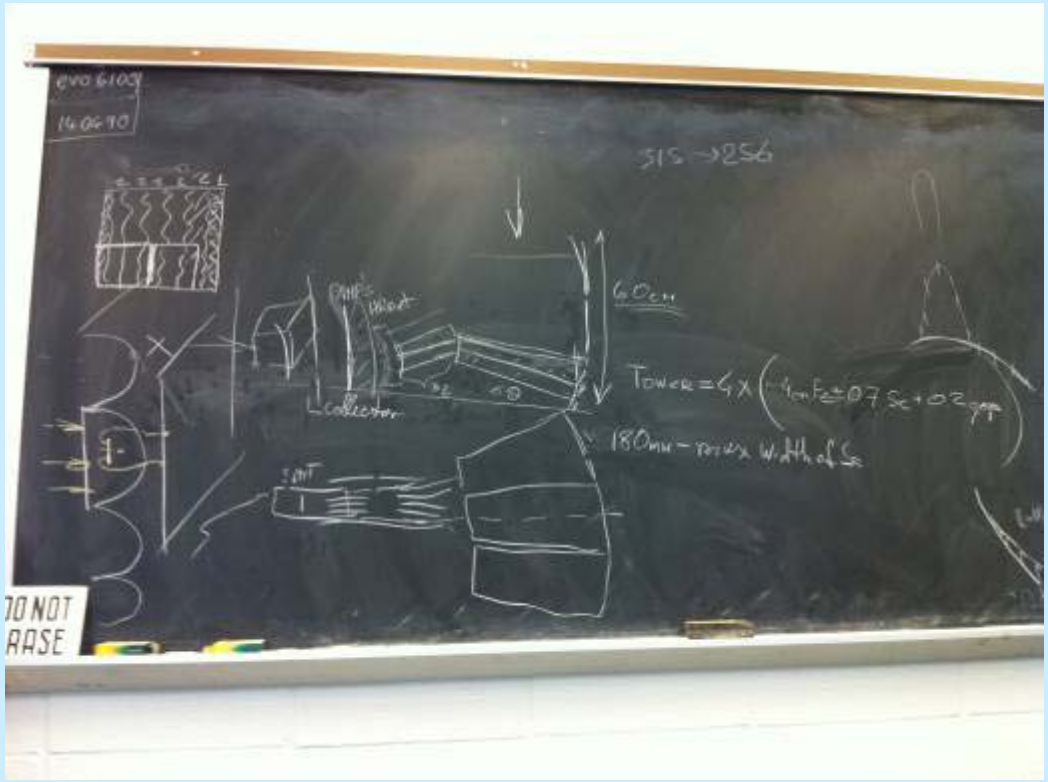


TECHNICAL SUPPORT 2012

Procedures for Shutdown 2012

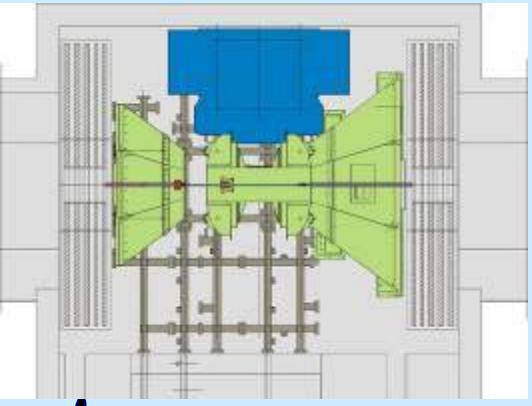
- Existing PHENIX General Purpose Recurring Task procedures -Done
- VTX Removal -Done
- FVTX/VTX installation -Done
- VTX Survey -Done
- FVTX Survey -Done
- FVTX Cooling SystemUpgrades -Done
- MuTr Maintenance & Upgrade (stations 1 2 & 3) -Done
- MuTrigger Maintenance and Upgrade -Done
- DC Repair – Incl. in WP
- MPC removal and re-installation – incl in WP -Done

Procedures will be part of 1 WP for VTX and FVTX

Incl. in separate WP's for MMN and MMS entry

Work Permits for Shutdown 2012

- Start of Shutdown (PHENIX) -Done
- VTX Removal/FVTX/VTX Installation -Done
- MuTr/MuTrigger Maintenance and Upgrade 3 WP's: Station 1, MMN and MMS work -Done
- RPC1 Cooling Upgrade (PHENIX) -Done
- DC West Repairs
- MPC repairs -Done
- VTX/FVTX Cooling Upgrade (PHENIX) -Done
- RPC Recirculation Upgrade (PHENIX) -Done
- RPC Background Attenuation Shielding 2
- End of Shutdown (PHENIX)



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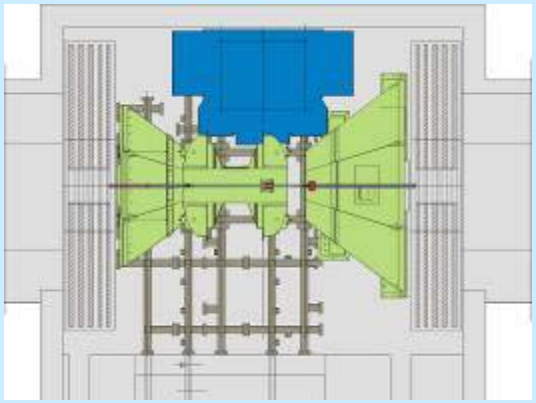
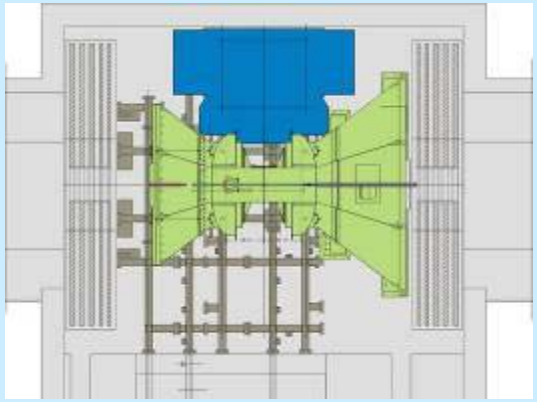
IR is currently in this configuration.



After all work MuTr South work is finished, move CM south, reinstall MPC complete RPC1 North work, survey step 1 for beampipe.



Then move CM north complete beampipe and CM survey. Move MMS North to run position. VTX/FVTX work may be done in any configuration.

2012 Shutdown Schedule

TECHNICAL SUPPORT 2012

Prep for shutdown	Done
Shutdown Standard Tasks	Done
• Open wall, disassemble wall, Remove MuID Collars,	
• Move EC to AH, etc.	
VTX Strip-pixel post run tests	Done
FVTX post run tests	Done
Disassemble VTX/FVTX services	Done
Open Station 1 North, remove MPC North for repairs	Done
Temporary power patch for IR and AH lights and cranes	Done
AH electrical power panel upgrades	Done
Remove VTX/FVTX and transport to Chemistry Lab	Done
Remove MMS vertical East lampshades	Done
Summer Sunday (8/5) Prep and teardown	Done
Remove MMS & MMN vertical East lampshades	Done *
MuTr South Station 1 work	
Install access (Sta. 1work platforms)	Done
Disconnect Cables, hoses etc, ID/label all	Done
Remove FEE plates and chambers	Done
Station 2 Terminators and manifold upgrade through access opened by station 1 removal	Done
Station 2 South Hall probe repair	Done
Clean/install new MuTr Sta. 1 chamber parts and upgrades (concurrent At RPC Factory)	Done
Re-install chambers and FEE plates	Done

2012 Shutdown Schedule (Continued)

TECHNICAL SUPPORT 2012

MuTr Station 1 Re-cable, re-hose and test	9/5-9/14/2012
Re-capacitation and air manifold upgrades	
Station 3 South (upper half)	10/19/2012
Remove Station 2/3 South scaffolding	10/26/2012
Re-install MMS lampshade	10/31/12
Station 3 North (upper half) Scaffolding	9/14/2012
Capacitor Clamps and air manifolds	11/9/2012
Remove station 2/3 scaffolding	11/16/2012
MPC South repairs	9/28/2012
MPC South Installed	10/5/2012
RPC 1 South cooling upgrade	10/12/2012
RPC1 South Thermocouples	10/12/2012
Remove Station 1 Scaffolding	10/15/2012
Move CM South, Open station 1 North	10/16/2012
VTX Cooling System Upgrades	10/5/2012
RPC Recirculation Upgrade	11/2/2012
Repair upgrade, reassemble VTX/FVTX	In Progress
Test, survey (at Chemistry and IR) and re-install VTX/FVTX	10/5-10/31/12
Substation breaker upgrade/test (CAD)	8/20-9/30 ?
DC West maintenance (replace window)	9/15-10/15
RPC Shielding under DX magnets	11/21/2012
RPC tunnel Shielding (Dave Phillips)	12/14/2012
Reinstall MPC North	10/26/2012

2012 Shutdown Schedule (Continued)

TECHNICAL SUPPORT 2012

RPC1 North Cooling upgrade	10/26/2012
RPC1 North Thermocouples	10/26/2012
Window Washer pin & spool upgrades	11/21/2012
MuID IR storage support	11/21/2012
Veterans Day Holiday	11/12/201212
Pre-run commissioning and prep for run 13	11/1-12/31/2012
Prep for EC roll in	11/12-11/16/2012
Roll in EC	11/19-11/21/2012
Thanksgiving Holidays	11/22-23/2012
Prep IR for run	11/26-12/3/2010
Pink/Blue/White sheets	12/3-12/21/201
Christmas Holidays	12/24-25/2012
Start run 13	1/1/2013

Ladder Safety

TECHNICAL SUPPORT 2012

This is the status and priority for the various fixed ladders at PHENIX:

Priority 1 and 2: Ladders to West carriage, North and South: Currently Red Tagged: do not use, South Ladder is simple move of PHENIX equipment. *North Ladder requires repositioning of the ladder, materials are here, we just need carpentry & rigging, hopefully this will be completed be mid next week.*

Priority 3: Ladder to Eyebrow: Currently Red Tagged: a work around is in place– use new cross over from bridge; ladder repairs in planning stage. Work around is not useable when we move the CM to the south position, so we will need the ladder repaired. *Requires carpentry and rigging, hopefully will be completed by the end of next week.*

Priority 4: Ladder to Muon ID Steel in Southeast IR: Currently Yellow Tagged: requires work permit to access. We can wait to have the repairs on this ladder. *No repairs planned, will probably remain yellow.*

Priority 5: Ladder to mezzanine over tech offices to 30 ton AC air handling unit: not yet inspected. This ladder is needed to service AC.

Priority 6: Ladder to PHENIX roof over tech offices. Used by AC techs to service 30 ton AC compressor. Will impact schedule if AC fails.

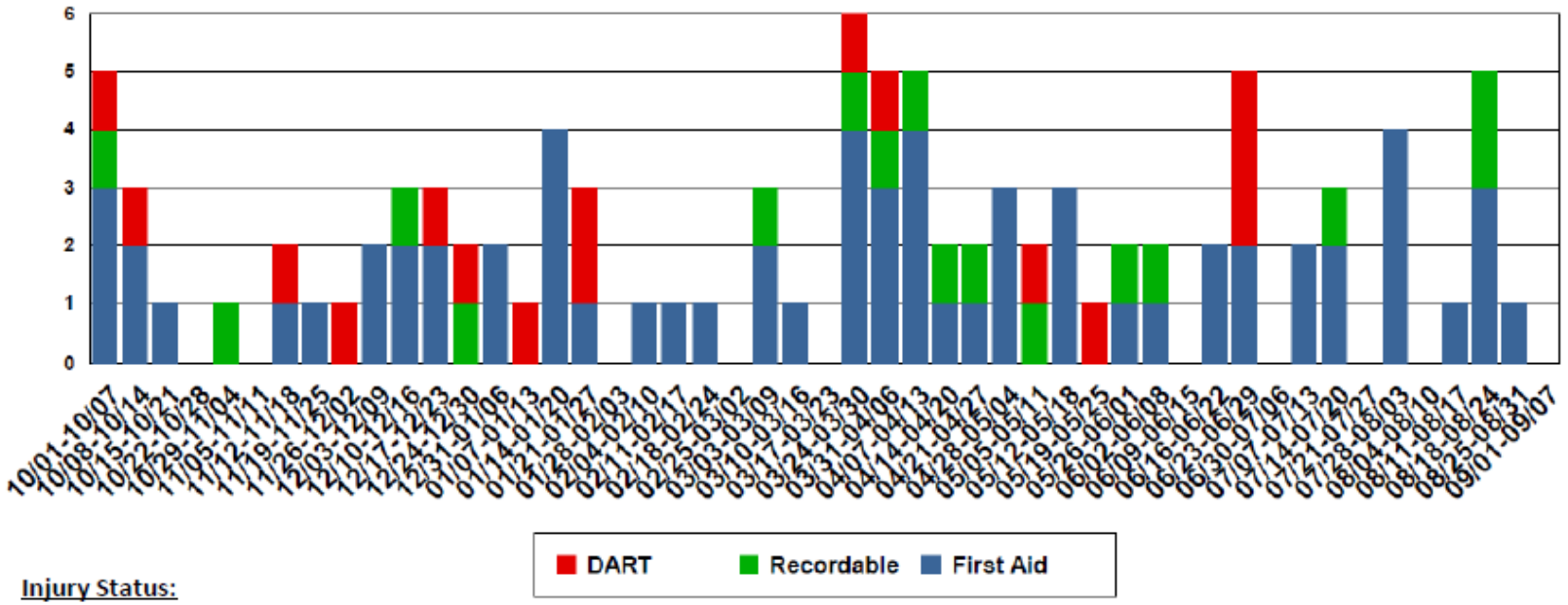
TECHNICAL SUPPORT 2012

Priority 7: Ladder to Muon ID Steel in Northeast IR: Not yet inspected: work around use yellow tower ships ladders and access from top level. Since we have a suitable workaround there is no urgency to get this ladder inspected.

Priority 8: AH ladder to crane: Not yet inspected: needed for crane servicing. Could impact schedule if crane requires service.

Priority 9 and 10: Ladders on Southwest and Northwest of MuID steel: Not inspected yet: do not use, no work around. These are needed to access plumbing for repairs. We have no current plans involving these ladders so they are low priority for inspection/repairs.

Injuries Per Week (FY)
As of 9/7/2012



Injury Status:

FY12 YTD: DART – 16, TRC – 32, First Aid – 65

FY11: DART – 30, TRC – 44, First Aid – 45

FY10: DART – 19, TRC – 33, First Aid – 52

FY12 Injury Listing: https://intranet.bnl.gov/esh/shsd/seg/OccInj/BNLInjuries.aspx

Recent Injuries		
		None

PHOENIX

TECHNICAL SUPPORT 2012

Recent Events		
9/7/12	Non-Reportable	An off-site mechanic was returning a privately owned vehicle to a Lab employee on-site. While driving on-site, he was stung by a bee causing him to lose veer off the road, contacting and breaking a fire hydrant causing an initiation of water flow. There was no apparent significant damage to the vehicle nor was there any apparent release of petroleum or hazardous material as a result. Fire/rescue responded, securing water flow, and assistance from the Motor Pool was given to assist with removal of the car from the hydrant. The driver was uninjured and declined any medical treatment. (Event Link)
9/6/12	Non-Reportable	Contractor electricians used a lock and tag intended for LOTO as an administrative control of a circuit breaker panel. The LOTO was removed by the contractor and replaced with an administrative lock and a caution tag. This violated OSHA 29 CFR 1910.147(a)(1)(i). This incident was initially communicated to the Project via e-mail from DOE-BHSO representative conducting a daily walk-about. (Event Link)
9/6/12	Non-Reportable	On Sept. 6 2012, at approximately 3:15 PM, a machinist working on the Okomoto CNC milling machine observed the following. While removing a steel part from the machine using the overhead crane and a lifting clamp, the clamp slipped and the part dropped 12" to the machine table. It didn't tumble and fall; it remained upright and stable. There were no injuries, broken parts or close calls, the operator was not in a danger zone and was wearing proper PPE. There were no other people in the area. (Event Link)
9/6/12	Non-Reportable	The two workers who were assigned to the 6-passenger dump truck towing the landscape trailer were returning to Bldg. 326 at 2:45 pm for the afternoon coffee break. The driver was proceeding down the alley way between Bldg. 326 and Bldg. 339 and made a left turn to park the vehicle behind Bldg. 339. While making the turn, with the landscape trailer in tow, the driver did not swing wide enough in the turn; such that the left side of the landscape trailer made contact with the mason's small dump truck already parked in the area, tearing some of the aluminum skin/siding off the landscape trailer. There was no damage to the mason's dump truck nor to the 6-passenger dump truck. There were no injuries to any personnel, nor were any bystanders nearby when it occurred. (Event Link)
9/5/12	Non-Reportable	A load lugger was in the process of returning the cardboard bucket back to the west side of Bldg 463. There is construction activity in this area (new green house in back of Bldg 463 with a construction fence in this area). The operator of the truck said the gate was open on the fence and as he attempted to drive around the small grass island he went up over the curb. As he hit the curb, there is a small air valve on the side of the air tank that came in contact with the curb and broke off. There is no other damage to the truck at this time. Some tire tracks on the grass. The Supervisor was notified of this incident immediately and he went right to the scene. Once there, he told the operator not to move the truck until he returned with the camera to document the scene. At that time he notified the General Supervisor and also called the Supervisor from the Motor Pool to send over some mechanics to check out the load lugger. Motor Pool is in the process of making repairs to the load lugger so that it can be brought back to the shop. (Event Link)

Where To Find PHENIX Engineering Info

September 13th: Defy Superstition Day, Fortune Cookie Day, Uncle Sam Day, National Peanut Day, Positive Thinking Day

This Week: National Food Alergy Week
National Alcohol and Other Related Birth Defects Week
National Women's Health Week
National Stuttering Awareness Week

http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm